



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

HONORABLE COMMISSIONER FOR PATENTS
ALEXANDRIA, VA 22313

Re: Patent Application of: Erfani *et al.*
Application Serial No.: 09/895,948
Filed: June 29, 2001
Examiner: Nathan M Curs
Group Art Unit: 2633

Title: Advanced Signaling System For Switching And Control In Integrated
Optical Networks

Sir:

Enclosed for filing in the United States Patent and Trademark Office are the following:

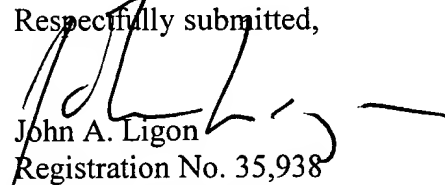
1. Appeal Brief
2. Transmittal Sheet
3. Fee Transmittal Sheet
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CONDITIONAL PETITION

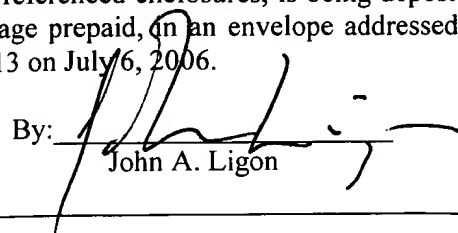
If any extension of time is required for the submission of the above-identified items, Applicant requests that this be considered a petition therefor. Please charge any additional charges relating to this matter to Deposit Account No. 50-1944. A duplicate copy of this letter is enclosed.

Dated: July 6, 2006

Respectfully submitted,


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I hereby certify that this correspondence, including the referenced enclosures, is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313 on July 6, 2006.

By: 
John A. Ligon



ERFANI 3-26-22

IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE

EEERANSMITTAL

Application Serial No.: 09/895,948

Group Art Unit: 2633

Filed: June 29, 2001

Attorney Docket No: Erfani 3-26-22

First Named Inventor: Erfani

Date: July 6, 2006

Examiner: Nathan M Curs

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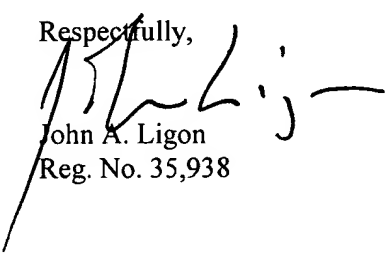
SIR:

Enclosed is an Appeal Brief in the above-identified application.

CLAIMS AS AMENDED						
	Claims Remaining After Amendment		Highest No. Previously Paid For	Present Extra	Rate	Additional Fee
Total Claims for Fee Purposes	19	minus	20	0	x \$50.00	\$0.00
Independent Claims	4	minus	4	0	x \$200.00	\$0.00
Filing Fee for Appeal Brief						\$500.00
TOTAL ADDITIONAL FEE FOR THIS AMENDMENT:						\$500.00

Please charge **Deposit Account No. 50-1944** the amount of \$500.00 to cover the fee for this response.In the event of any non-payment or improper payment of a required fee, the Commissioner is authorized to charge or to credit **Deposit Account No. 50-1944** as required to correct the error.

Respectfully,


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ERFANI 3-26-22

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THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Patent Application of:

Erfani *et al.*

Serial No.: 09/895,948

Filed: June 29, 2001

Title: **Advanced Signaling System For
Switching And Control In Integrated
Optical Networks**

Group Art Unit: 2633

Examiner: **Nathan M Curs**

Dated: **July 6, 2006**

TO: **HONORABLE COMMISSIONER FOR PATENTS
ALEXANDRIA, VA 22313**

BRIEF OF APPELLANT

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BRIEF OF APPELLANT**TABLE OF CONTENTS**

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THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Patent Application of:	:	
Erfani <i>et al.</i>	:	Group Art Unit: 2633
Serial No.: 09/895,948	:	
Filed: June 29, 2001	:	Examiner: Nathan M Curs
Title: Advanced Signaling System For	:	
Switching And Control In Integrated	:	Dated: July 6, 2006
Optical Networks	:	

**TO: HONORABLE COMMISSIONER FOR PATENTS
ALEXANDRIA, VA 22313**

BRIEF OF APPELLANT

This is an appeal from the final Rejection of the Examiner dated December 29, 2005 rejecting all claims. The requisite fees set forth in Section 1.17 of the Regulations accompany this Brief.

REAL PARTY IN INTEREST

The application is assigned to Lucent Technologies, Inc.

RELATED APPEALS AND INTERFERENCES

None

STATUS OF CLAIMS

This application was filed as an original application on June 29, 2001, containing 19 claims, of which four were independent claims (Claims 1, 11, 16 and 19).

In an Office Action dated April 15, 2004, Figure 1 of the drawings was objected to as requiring a legend indicating that the subject matter of the drawing was prior art. Applicants submitted a proposed drawing correction including the "Prior Art" legend.

In the same Office Action claims 1, 8-10 and 16 were rejected under 35 USC §102(e) as being anticipated by U.S. Published Patent Application No. 2003/0035411A1 to Moy *et al.*, and independent claims 11 and 19, along with all remaining dependent claims, were rejected under 35 USC §103(a) as being unpatentable over a combination of Moy *et al.* and at least one of three cited secondary references.

Applicants sought reconsideration of that rejection by an Office Action Response filed on October 15, 2004, which argued that the art of record did not support the Examiner's 35 U.S.C. §102/103 claim rejections. Each of the independent claims was amended in that response to better support the distinctiveness over the art described in Applicants' argument.

In the next Office Action dated February 7, 2005, which was a final action, the art rejections of the previous action were maintained. In a Response to Final Office Action dated May 9, 2005, accompanied by a Request For Continued Examination (and payment of associated filing fees), the Applicants again argued that the cited art did not show or suggest the claimed features of the invention, and further amended each of the independent claims to add a new limitation intended to better characterize the distinctiveness of the claimed invention over the cited art.

In a further Office Action dated June 28, 2005, which was a non-final action, the Examiner again applied the original art rejections. In a Response To Office Action dated October 28, 2005, the Applicants continued their argument that the cited art does not teach the claimed features of the invention, and further amended each of the independent claims in a manner intended to emphasize the argued distinctiveness of the invention of the applied art.

In a Final Office Action dated December 29, 2005, all of the prior art rejections of the claims were repeated.

On May 1, 2006 the Applicants filed a Notice of Appeal herein in response to the December 29, 2005 Final Office Action. In conjunction with the Notice of Appeal, Applicants also filed a Pre-Appeal Brief Request for Review with accompanying supporting memorandum. By Notice of Panel Decision dated June 6, 2006, Applicant was notified that the application should proceed to appeal on the basis that there is at least one actual issue for appeal.

The status of claims as set out in the December 29, 2005 Final Office Action was, and is as follows:

Allowed Claims: None

Claims Rejected, and Appealed herein: 1-19

STATUS OF AMENDMENTS

Applicant's claim amendments filed October 28, 2005 have been entered and the claims in the case, as set out in Appendix A, include those amendments.

SUMMARY OF THE INVENTION

The invention claimed here is directed to an enhanced signaling system that operates to provide a signaling platform that is independent of the electronic and optical switching and transmission systems interconnected with an integrated optical network. In particular, the enhanced signaling system of the invention provides a signaling mechanism that allows any device interfaced to the optical network to be handled without the need to use the legacy signaling techniques of that device. A key feature of the invention is that of the signaling method and apparatus of the invention operating to process signaling information from various external signaling networks or devices, including networks/devices operating with electronic signaling, independently of the legacy signaling techniques of the external network or device.

Thus the signaling can be accomplished by way of optical interfaces that couple directly to the respective optical components rather than having signaling being accomplished through electrical connections as occurs in the prior art.

Independent apparatus claims 1, 11 and 19 are directed to signaling apparatus operable in a communications switching system comprising the feature of the invention whereby signaling information from various external signaling networks or devices is processed independently of the legacy signaling techniques of the external network or device, thereby permitting the signaling to be accomplished by way of optical interfaces that couple directly to respective optical components. Independent method claim 16 is directed to a signaling method for operation in a switching system and incorporating the feature of the invention whereby signaling information from various external signaling networks or devices is processed independently of the legacy signaling techniques of the external network or device, thereby permitting the signaling to be accomplished by way of optical interfaces that couple directly to respective optical components.

The feature of the invention respecting the processing of signaling information independently of legacy signaling techniques is described at page 6, line 1 through page 7, line 6, and particularly at page 6, lines 1-5 and page 6, lines 16-18. Each of the independent claims was amended during the prior prosecution to include a limitation clearly addressed to this feature of the invention.

ISSUES

The Examiner has rejected two of Applicants' independent claims, and certain identified dependent claims, under 35 U.S.C. §102, on the ground that the claimed invention lacks novelty over a single cited reference, and rejected the remaining independent claims and

all remaining dependent claims as being unpatentable over the cited §102 reference in view of one or more of three cited secondary references. Accordingly, the issue in this appeal is that of whether the references cited by the Examiner support his rejection bases.

GROUPING OF CLAIMS

All of the rejected claims stand together as a single group.

ARGUMENT

Two of the pending independent claims (claims 1 and 16), along with dependent claims 8-10 stand rejected as being anticipated by Moy *et al.* (U.S. Published Patent Application No. 2003/0035411A1). The remaining independent claims (claims 11 and 19) and all remaining dependent claims stand rejected as being unpatentable over combinations of Moy *et al.* and at least one of three cited secondary references. Applicants respectfully submit that the cited art does not teach or suggest one or more distinguishing features of the invention which appear as limitations in each of the independent claims.

The invention disclosed and claimed in this application is directed to an enhanced signaling system that operates to provide a signaling platform that is independent of the electronic and optical switching and transmission systems interconnected with an integrated optical network. In particular, the enhanced signaling system of the invention provides a signaling mechanism that allows any interface device to the optical network to be handled without the need to use the legacy signaling techniques of that device. A key feature of the invention is that of the signaling method and apparatus of the invention operating to process signaling information from various external signaling networks or devices, including networks/devices operating with electronic signaling, independently of the legacy signaling techniques of the external network or device. Thus the signaling can be accomplished by way

of optical interfaces that couple directly to the respective optical components rather than having signaling being accomplished through electrical connections as occurs in the prior art. Each of the independent claims was amended during the prior prosecution to include a limitation clearly addressed to this feature of the invention.

Notwithstanding the Examiner's repeated assertions of Moy as teaching the essential features of the invention (and to which the Applicants have offered repeated amendments directed to more precisely characterizing the distinction over Moy), Applicants respectfully submit that Moy simply does not provide a teaching that can reasonably be construed to show or suggest a ubiquitous signaling system that operates to interface multiple legacy external signaling systems to an integrated optical network independently of the signaling techniques/protocols of those multiple external signaling systems. The Applicants further submit that the passages in Moy cited in support of the Examiner's position that Moy discloses signaling being "independent of legacy signaling methodologies" really teach no more than that Moy operates to convert between electrical and optical signals at some interfaces.

Indeed, the thrust of Moy is directed to the transmission of payload via Moy's network, rather than to signaling for such transmission. The only signaling addressed by Moy is that of signaling between an end user device and an input node to the optical network of Moy, signaling which in most cases will be electrical in character, with no suggestion of conversion to optical form for interfacing with the optical network.

In the final analysis, the invention here operates to address a combination of many heterogeneous systems which each may require a different signaling system to launch a call across an optical network, and provides a new signaling approach whereby all signaling translations for the different end points are handled independently of the legacy end-point

signaling systems. Nothing in the teaching of Moy can reasonably be construed to teach or suggest such a ubiquitous signaling mechanism that operates independently of the external signaling networks to which it is interfaced.

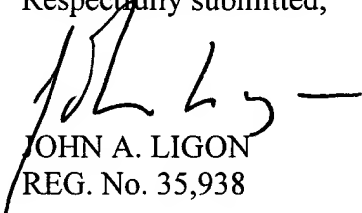
In regard to the claims rejected as being unpatentable over a combination of Moy and one or more secondary references, it is noted that Moy is relied on in all such rejections as teaching the feature of the invention whereby the signaling mechanism operates independently of the external signaling networks to which it is interfaced. As shown above, Moy can not reasonably be construed to teach that feature of the invention. Thus, the primary reference for those unpatentability rejections fails, and the recited combinations must therefore necessarily fail.

Each of Applicants' independent claims includes a limitation addressed to the distinguishing feature of the invention described above – independence of signaling from legacy signaling techniques of interfaced networks/devices. Accordingly, Applicant submits that all of the independent claims should be found patentable over the art of record. The remaining rejected claims all depend, either directly or indirectly from one of those independent claims, and should also be patentable.

Although the Applicants recognize that the USPTO need not accord any precedential value to actions of other national patent offices, they believe it worthy of note that, in the counterpart application for this invention filed with the European Patent Office, an independent claim corresponding in substance to independent claim 19 here has been allowed by the EPO. The other independent claims pending here were not considered by the EPO Examiner.

Appellant therefore respectfully requests that the Board reverse the Examiner on the issue of whether Applicant's claimed invention is novel and patentable over the references cited by the Examiner, and that it thereupon direct the allowance of the present application.

Respectfully submitted,


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I hereby certify that this Brief of Appellant is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313 on July 6, 2006.

By: 

John A. Ligon

APPENDIX
CLAIMS IN CASE

The Claims

1. (Previously Presented) An apparatus for providing direct signaling for switching and control of transmissions in an integrated optical network, said apparatus comprising:
- 5 a plurality of electrical signaling interfaces for receiving requests from external signaling networks;
- a processing module for processing said requests from said external signaling networks; and
- 10 at least one optical signaling interface for coupling to optical components in said integrated optical network, said optical signaling interface being operable to transmit processed requests from said processing module for assignment of optical channels for said optical components;
- 15 wherein signaling processed by said processing module from said external signaling networks is provided directly to the optical network components via said optical signaling interface and is independent of legacy signaling methodologies employed by ones of said external signaling networks.
2. (Original) The apparatus of Claim 1, wherein said external signaling networks are selected from the group consisting of circuit switched signaling networks, packet switched signaling networks, SS7, H323, SIP and other enhanced signaling system (ESS) apparatus.

3. (Original) The apparatus of Claim 1, wherein said optical components are selected from the group consisting of optical cross connects, optical add/drop multiplexers and optical service nodes including at least one optical cross connect and optical add/drop multiplexer.
4. (Original) The apparatus of Claim 1, wherein said processing module is a signaling and call control processor.
5. (Original) The apparatus of Claim 4, further including a signaling and endpoint applications module coupled to said processor module for providing electronic and optical routing decisions.
6. (Original) The apparatus of Claim 5, further including a network management and provisioning module for providing network management interaction for reporting of alarms and receiving commands for provisioning and reconfiguration of said apparatus.
7. (Original) The apparatus of Claim 6, further including a system administration module for providing an operator interface for administration and maintenance of said system.
8. (Original) The apparatus of Claim 1, wherein said optical signaling interface couples to said optical components through an optical user network interface.
9. (Original) The apparatus of Claim 8, wherein said apparatus is further operable to control signaling of electrical switching devices that couple to said apparatus through an optical service node.

10. (Original) The apparatus of Claim 1, wherein said apparatus is operable to assign individual wavelengths in said optical components in accordance with requests from said external signaling networks and allocate calls to existing wavelengths.

11. (Previously Presented) An apparatus for providing switching fabric independent allocation of transport resources in an integrated optical network, said apparatus comprising:

5 a plurality of electrical signaling interfaces for receiving requests from external signaling networks;

a signaling and call control module for processing said requests from said external signaling networks;

a signaling and endpoint applications module coupled to said signaling and call control module for providing electronic and optical routing decisions;

10 a network management and provisioning module for providing network management interaction for reporting of alarms and receiving commands for provisioning and reconfiguration of said apparatus; and

at least one optical signaling network interface for coupling to optical components in said integrated optical network, said optical signaling interface being
15 operable to transmit processed requests from said signaling and control module for assignment of optical channels for said optical components;

wherein signaling processed by said signaling and call control module from the external signaling networks is provided directly to the optical network components via

said optical signaling network interface and is independent of legacy signaling
20 methodologies employed by ones of said external signaling networks.

12. (Original) The apparatus of Claim 11, wherein said apparatus is further operable to control signaling of electrical switching devices that couple to said apparatus through an optical service node.

13. (Original) The apparatus of Claim 11, wherein said apparatus is operable to assign individual wavelengths in said optical components in accordance with requests from said external signaling networks and allocate calls to existing wavelengths.

14. (Original) The apparatus of Claim 11, wherein said external signaling networks are selected from the group consisting of circuit switched signaling networks, packet switched signaling networks, SS7, H323, SIP and other enhanced signaling system (ESS) apparatus.

15. (Original) The apparatus of Claim 11, wherein said optical components are selected from the group consisting of optical cross connects, optical add/drop multiplexers and optical service nodes including at least one optical cross connect and optical add/drop multiplexer.

16. (Previously Presented) A method for providing direct signaling for switching and control of transmissions in an integrated optical network, said method comprising:

- receiving requests from external signaling networks at an electrical signaling
5 interface;
processing said requests from said external signaling networks; and
transmitting processed requests from said processing module via an optical
signaling interface that couples to optical components in said integrated optical network
for assignment of optical channels for said optical components;
10 wherein said processing step operates to process signaling requests from the
external signaling networks for provision directly to the optical network components
via said optical signaling network interface, the processed signaling being independent
of legacy signaling methodologies employed by ones of said external signaling
networks.

17. (Original) The method of Claim 16, wherein said external signaling
networks are selected from the group consisting of circuit switched signaling networks,
packet switched signaling networks, SS7, H323, SIP and other enhanced signaling
system (ESS) apparatus.

18. (Original) The method of Claim 16, wherein said optical components
are selected from the group consisting of optical cross connects, optical add/drop
multiplexers and optical service nodes including at least one optical cross connect and
optical add/drop multiplexer.

19. (Previously Presented) A system for providing direct signaling for switching and control of transmissions in an integrated optical network, said system comprising:

a signaling apparatus including,

5 a plurality of electrical signaling interfaces for receiving requests from external signaling networks;

a processing module for processing said requests from said external signaling networks; and

10 at least one optical signaling interface for coupling to optical components in said integrated optical network, said optical signaling interface being operable to transmit processed requests from said processing module for assignment of optical channels for said optical components;

an optical service node including,

at least one optical cross connect (OXC); and

15 at least one optical add/drop multiplexer (OADM), said OADM including electrical interfaces to circuit switched and packet switched fabrics, said OXC and OADM each including at least one interface to an optical network or other optical components,

20 said optical service node coupling to said signaling apparatus through said optical signaling interface wherein signaling processed by said processing module from the external signaling networks is provided directly to the optical network components via said optical signaling interface and is independent of legacy signaling methodologies employed by ones of said external signaling networks.